Microsoft

20483C: Programming in C#

Classroom Setup Guide

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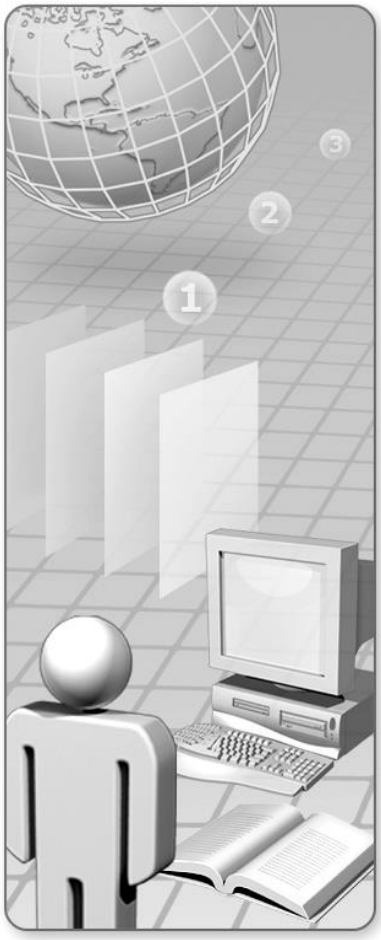

Template v2.0

Product Number: 20483C

Introduction – No VM Courseware

This course's lab experience was designed to run on the student's own PCs. The course is not shipped with a dedicated virtual machine. Students should install the required software specified below on their PCs. Training centers interested in providing the development environment for their enrolled students should follow the below installation steps for each classroom PC.

Digital Courseware

If you are using digital courseware via the Skillpipe reader from Arvato, if the course contains a "boot to vhd" or "native boot" scenario in some or all of the labs, students will not be able to view the online courseware content and lab steps in the Skillpipe reader while their host machine is offline. In this particular scenario, there are available options:

1. Have two network interface cards (NICs) in the host machines.
2. Print out Lab steps for the particular module.
3. Ask student who have their own devices to bring them to the class.
4. Configure two virtual machines prior to the class to allow access to the content offline.

Depending on your particular situation, consider implementing one of the above options. Further details and considerations for these workarounds and options are available on the Born To Learn website at https://borntolearn.mslearn.net/, and have also been sent out via partner and MCT newsletters.

Important: Additional virtual machine configuration may be required. Therefore, you should allow enough time to assess your situation and make appropriate decisions.

Setup Overview

The host computers must be set up with Windows 10 Professional or Windows 10 Enterprise and must be running on 64-bit hardware.

Classroom Requirements

This learning product requires a classroom with a minimum of one computer for the instructor and one for each student. Before class begins, use the following information and instructions to install and configure all computers.

Hardware

The classroom computers require the following hardware and software configuration.

Hardware Level 6

- Processor: Intel Virtualization Technology (Intel VT) or AMD Virtualization (AMD-V)
- Hard Disk: Dual 120 GB hard disks 7200 RM SATA or better (Striped)
- RAM: 4 GB expandable to 8GB or higher
- DVD/CD: DVD drive
- Network adapter
- Video Adapter/Monitor: 17-inch Super VGA (SVGA)
- Microsoft Mouse or compatible pointing device
- Sound card with amplified speakers

In addition, the instructor computer must be connected to a projection display device that supports SVGA 1024 x 768 pixels, 16 bit colors.

In addition, the instructor computer must:

- Be connected to a projection display device that supports SVGA 1024 x 768 pixels, 16 bit colors.
- Have a sound card with amplified speakers

*__Note:__ To determine what features your processor supports, download Coreinfo from http://aka.ms/coreinfo

Software

Please note that, unless otherwise indicated, this software is not included in the Trainer Materials disc. This learning product was developed and tested on supported Microsoft software, which is required for the classroom computers.

Also required, but not included in the Training Materials: Microsoft Office PowerPoint® 2007 (instructor computer only).

Important: Windows 10 is required for running this course. Before starting the installations, make sure that your copy of Windows is up to date.

Classroom Configuration

Estimated Time to Set up the Classroom: 60 Minutes

Instructor and Student Computer Checklist

- ☐ 1. Install Microsoft Visual Studio 2017 Community Edition
- ☐ 2. Install Odata Extension and Assets
- ☐ 2. Install Microsoft SQL Server 2017 Express Edition
- ☐ 3. Get Allfiles and the associated lab and demos documentation and instructions from GitHub
- ☐ 4. Get the Microsoft PowerPoint slide deck

Instructor and Student Computer Setup

Use the instructions in the following section to set up the classroom manually. Before starting the installation of the instructor computer, a supported operating system and Microsoft Office Power Point® 2007 must be installed on the computer.

1. Install Visual Studio 2017 Community Edition

In this task, you will install the Visual Studio 2017 Community Edition software on the machine.

1. Go to https://www.visualstudio.com/downloads/ and then click **Free download** under Visual Studio Community 2017.
2. Make sure that the downloaded VS Community version is **15.6.6** or Higher.
3. Double-click on the downloaded .exe file and then Click **Yes** on the **User Account Control** dialogue box.
4. On the Visual Studio dialogue box, Click **Continue**.
5. On the **Workloads** page, Under **Windows (3)** select **Universal Windows Platform development** and on the summary pane, make sure whether below check boxes are checked in
    a. Windows 10 SDK (10.0.15063.0) for UWP: C#,VB,JS
    b. Windows 10 SDK (10.0.14393.0)
    c. Windows 10 SDK (10.0.10586.0)
    d. Windows 10 SDK (10.0.10240.0)
6. On the **Workloads** page, Under **Web & Cloud (7)** select **ASP.NET and web development** and on the summary pane, make sure whether below checkboxes are checked in.
    a. .NET Framework 4 – 4.6 development tools
    b. Cloud Tools for web development
    c. ASP.NET MVC 4
    d. .NET Framework 4.6.2 development tools
    e. Entity Framework 6 tools
    f. Windows Communication Foundation
7. Under **Individual components,** make sure the below checkboxes are checked:
    a. .NET Framework 4.7 SDK
    b. .NET Framework 4.7 targeting pack
    c. .NET Framework 4.7.1 SDK
    d. .NET Framework 4.7.1 targeting pack
8. On the **Workloads** page, Under Windows (3) select .**NET Desktop development**.
9. Click **Install**.
10. If a **Reboot required** dialog box appears, Click **Restart**.
11. After System Restart completed, Open **Visual Studio 2017**.
12. On the Visual Studio **Welcome** Page, Click **Not now, maybe later.**

13. On the **Start with a familiar environment** page, select theme of your choice and then click **Start Visual Studio.**
14. Click **Start** and if necessary click **All Apps** scroll down and right-click on **Visual Studio 2017** tile and then select **Pin to Start.**

2. Install Odata Extension and Assets

In this task you will install OData VS extension and required WCF assets

1. Ensure that you have cloned the 20483C directory from GitHub. It contains the code segments for this course's labs and demos. (https://github.com/MicrosoftLearning/20483-Programming-in-C-Sharp/tree/master)
2. Navigate to **Allfiles/Assets** and then double-click **Microsoft.OData.ConnectedService.vsix** and follow the installation instructions.
3. Double-click **WcfDataServices.exe** and follow the installation instructions
4. Double-click **WCF.reg**, in the **User Account Control** dialog, click **Yes**.
5. In the **Registry Editor** dialog, click **Yes**.
6. In the **Registry Editor** dialog, click **OK**.

3. Install SQL Server 2017 Express Edition

In this task you will install SQL Server 2017 Express Edition.

1. Get and Download the SQL Server 2017 Express from **SQL Server 2017 Express**
2. Once the download gets complete click **Run**.
3. Click **Yes**, If it asks for any permission prompt
4. On the **Select an installation type,** Select **Basic**.
5. On the **Microsoft SQL Server Licence Terms** page, Click **Accept**.
6. On the **Specify SQL Server install location** page, Click **Install**.
7. On the **Installation has completed successfully!** Page, Click **Install SSMS.**
8. If **How do you want to open this?** Page appears, select **Microsoft Edge** and then click **OK.**
9. When it re-directed to the Web Page, click **Download SQL Server Management Studio 17.6**.
   NOTE: verify whether you have a previous 17.x version installed. If you have previous Versions Installed, download the patch (click **Download SQL Server Management Studio 17.6 Upgrade Package (upgrades 17.x to 17.6)**).
10. Once the download gets completed, click **Run.**
11. On the **user account control** dialog box, click **Yes.**
12. If you get a Prompt to restart the System, Click **Restart**.
13. After System restart completed, double click on the **SQLServer2017-SSEI-Expr.exe** (downloaded in Step 1) file and continue from **Step 3**.
14. On the Welcome. Click **"Install"** to begin page, Click **Install**.
15. On the **Setup Completed** page, Click **Close.**
16. If the **Restart required in order to complete setup** page, Click **Restart**.
17. On the **SQL Server 2017 Express Edition** page, Click **Close.**

18. On the **SQL Server Installer,** Click **Yes.**
19. Click **Start** and if necessary click **All Apps** scroll down and expand Microsoft SQL Server Tools 17and right-click on **Microsoft SQL Server Management Studio 2017** tile and then select **Pin to Start.**

4. Get Allfiles and the associated instructions from GitHub

The source files (Allfiles directory) for this course are hosted and maintained in GitHub.

1. In your browser, type https://github.com/MicrosoftLearning/20483-Programming-in-C-Sharp in the address bar.
2. Expand **Clone or Download**, and then click **Download ZIP**.
3. After the download is complete, navigate to your **Downloads** folder, right click the downloaded archive, and then click **Extract All...**.
4. In the **Extract Compressed (Zipped) Folders** window, delete the default path from the textbox, type **c:**, and then click **Extract**.
5. The downloaded folder includes all the relevant documentation:
    a. Lab Manual. A set of tasks for each module.
    b. LAK. A set of step-by-step instructions for performing the labs.
    c. DEMO. A set of instructions for executing the included demos.
    d. Allfiles. A directory which contains all the needed source code.
6. Once the extraction is complete, navigate to **C:\ 20483-Programming-in-C-Sharp-master**, highlight the **Allfiles** and **Instructions** folders, right click any of them and then click **Copy**.
7. Navigate to **C:** and paste the two folders directly under C:\
8. After completing the above steps, you should have the **Allfiles** and **Instructions** folders under **C:**. The rest of the files that were downloaded as a part of the repository from GitHub are not needed.

5. Get the PowerPoint slide deck – instructor machine only

In this task, you will download the PowerPoint slide deck for this course.

1. Go to the MCT Download Center at: https://learningdownloadcenter.microsoft.com.
2. Sign in with your MCT credentials.
3. In the search box, type **20483**, and then press **Enter**.
4. In the search results, expand **20483C: Part 1 - Trainer Files – Programming in C#**.

5. Locate the PowerPoint resource in the list, select the checkbox next to it, and then click **Add to Download Queue**.
6. To download the PowerPoint files, follow the instructions on the webpage.
7. Save the files to the **C:\ 20483-Programming-in-C-Sharp-master** folder, which was created when the GitHub repository was extracted in the previous section.